Cloud Engineer Command List

Updated May 2019

CLI /SDK Project Commands

-List Projects

gcloud projects list

-Set Your Default Project In GCP

gcloud config set project myProject

-Set Your Default Region

gcloud config set compute/region "europe-west1"

-List Compute Regions

gcloud compute zones list

-Set Cloud Functions Default region

to use when working with Cloud Functions resources.

gcloud alpha functions regions list

-Describe List Compute Zones

gcloud compute zones list

-Print List All the URI in a zone

gcloud compute zones list --uri

-List DNS info in Project

gcloud dns project-info describe

Describe a Project

gcloud compute project-info describe --project

Setup IDE Environment

After downloading your version we need to initialize the IDE environment and connect to GCP.

“gcloud init”

Then pick a configuration (Project) and follow prompts. Set account and project, region and zone

Install Emulators.. > Available for

- Bigtable
- Datastore
- Firestore
- Pub/Sub

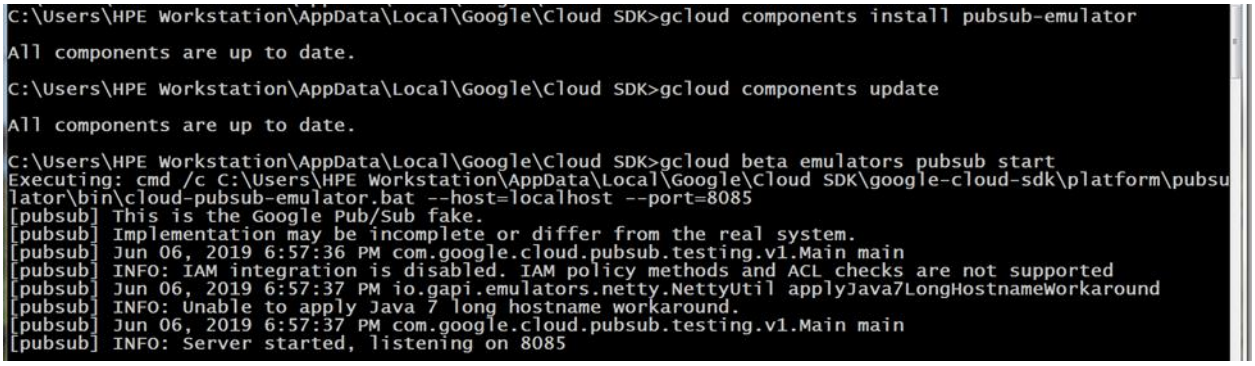
Use the follow commands to install emulator for Pub/Sub

gcloud components install pubsub-emulator

gcloud components update

To start the Pub/Sub emulator

gcloud beta emulators pubsub start



Snapshots

Get list of snapshots in your current project

gcloud compute snapshots list

Snapshot from an existing disk

gcloud compute disks snapshot

Roles

gcloud iam roles copy

Deployment Manager

gcloud deployment-manager deployments create example-deployment --config configuration-file.yaml \

--preview

Kubenetes Engine

Container Commands for GCP Cloud Developer Exam

You may want to practice these… Very important to understand how to increase cluster size and enable autoscaling for the cluster

Be sure to Create a Kubernetes Cluster and configure it to host an application

Understand how to make the cluster auto repairable and upgradable. Hint – Node auto-upgrades and auto-repairing feature

-Setup

export PROJECT_ID="$(gcloud config get-value project -q)"

docker build -t gcr.io/$PROJECT_ID/hello-app:v1 .docker images

- Gcloud Container Commands

gcloud container clusters create hello-cluster --num-nodes=3

gcloud config set compute/zone us-central1-b

gcloud container clusters create hello-cluster --num-nodes=3

gcloud docker -- push gcr.io/${PROJECT_ID}/hello-app:v1

Delete or Add a Node

```
gcloud container clusters resize [CLUSTER_NAME] \
--node-pool [NODE_POOL] \
   --size [SIZE]
```

- Kubectl Commands

```
kubectl run hello-web --image=gcr.io/${PROJECT_ID}/hello-app:v1 --port 8080

kubectl get pods

kubectl get nodes

kubectl expose deployment hello-web --type=LoadBalancer --port 8080

kubectl get services

kubectl scale deployment hello-web --replicas=3 Add (Expand)
```

- CLOUD SQL COMMANDS

Perform this demo on GCP before exam….

https://cloud.google.com/sql/docs/mysql/quickstart

Connect to instance

gcloud sql connect myinstance --user=root

Create a SQL database on your Cloud SQL instance:

CREATE DATABASE guestbook;

Insert sample data into the guestbook database:

```
USE guestbook;
CREATE TABLE entries (guestName VARCHAR(255), content VARCHAR(255),
   entryID INT NOT NULL AUTO_INCREMENT, PRIMARY KEY(entryID));
   INSERT INTO entries (guestName, content) values ("first guest", "I got here!");
   INSERT INTO entries (guestName, content) values ("second guest", "Me too!");
```

Retrieve the data:

```
SELECT * FROM entries;
```

- **CLOUD SPANNER Commands and Syntax**

Developer and Data Architect exams have a small expectation that you know SQL but also Cloud Spanner.

```
gcloud spanner instances create

gcloud spanner instance-configs list

gcloud spanner instances create [MY_INSTANCE_ID] --config=regional-us-central1 --
description="My Instance" --nodes=5

gcloud spanner instances list

gcloud spanner instances update [MY_INSTANCE_ID] --nodes=3

gcloud spanner databases create [MY_DATABASE_ID] --instance=[MY_INSTANCE_ID]

gcloud spanner databases list --instance=[MY_INSTANCE_ID]

gcloud spanner databases delete [MY_DATABASE_ID] --instance=[MY_INSTANCE_ID]
```

```
CREATE TABLE Singers (  SingerId   INT64 NOT NULL,
  FirstName  STRING(1024),
  LastName   STRING(1024),
  SingerInfo BYTES(MAX),
  BirthDate  DATE,)
PRIMARY KEY(SingerId);

CREATE INDEX SingersByFirstLastName ON Singers(FirstName, LastName);

CREATE TABLE Albums (  SingerId        INT64 NOT NULL,
  AlbumId         INT64 NOT NULL,
  AlbumTitle      STRING(MAX),
  MarketingBudget INT64,)
 PRIMARY KEY(SingerId, AlbumId),
  INTERLEAVE IN PARENT Singers ON DELETE CASCADE;


CREATE TABLE Songs (  SingerId  INT64 NOT NULL,
 AlbumId   INT64 NOT NULL,
  TrackId   INT64 NOT NULL,
 SongName  STRING(MAX),
  Duration  INT64,  SongGenre STRING(25),) PRIMARY KEY(SingerId, AlbumId, TrackId),
  INTERLEAVE IN PARENT Albums ON DELETE CASCADE;
```

CREATE INDEX SongsBySingerAlbumSongNameDesc ON Songs(SingerId, AlbumId, SongName DESC), INTERLEAVE IN Albums;

CREATE INDEX SongsBySongName ON Songs(SongName);

CREATE TABLE Concerts (VenueId INT64 NOT NULL, SingerId INT64 NOT NULL, ConcertDate DATE NOT NULL, BeginTime TIMESTAMP, EndTime TIMESTAMP, TicketPrices ARRAY<INT64>) PRIMARY KEY(VenueId, SingerId, ConcertDate);

CREATE INDEX AlbumsByAlbumTitle ON Albums(AlbumTitle);

CREATE INDEX AlbumsByAlbumTitle2 ON Albums(AlbumTitle) STORING (MarketingBudget);

- Cloud Pub/Sub

Create Topic

gcloud pubsub topics create pearson

List Topics

gcloud pubsub topics list

Describe Topics

gcloud pubsub topics describe pearson

Send Message to Topic

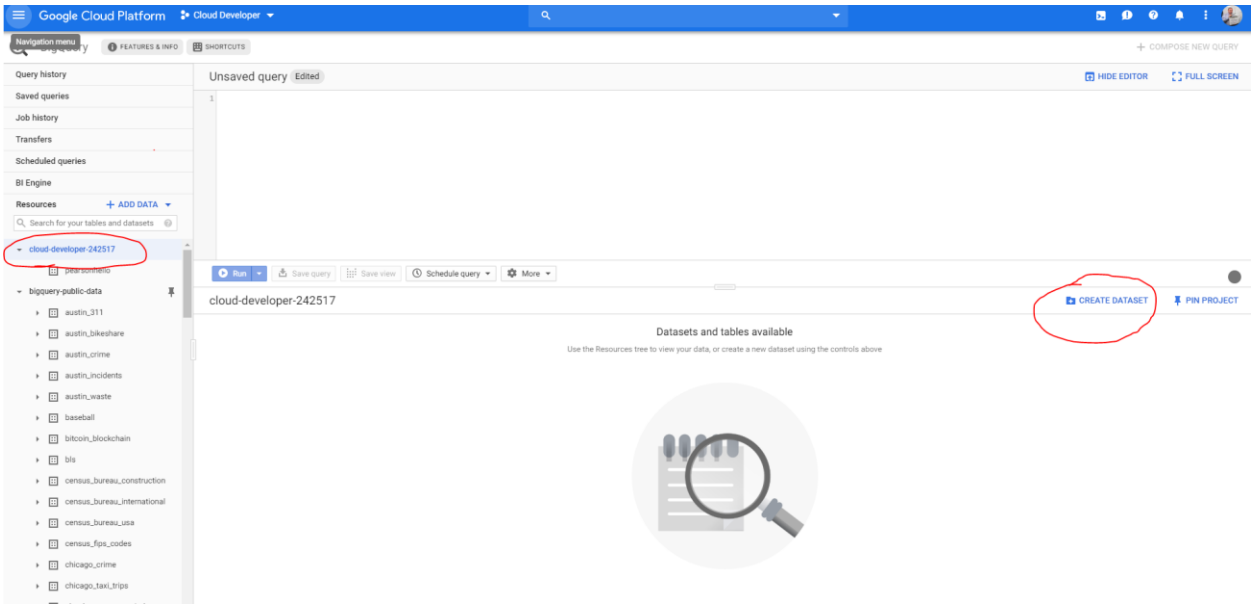
gcloud pubsub topics publish pearson --message “hello Pearson”

Bigquery

Create Bigquery dataset

To create a dataset.

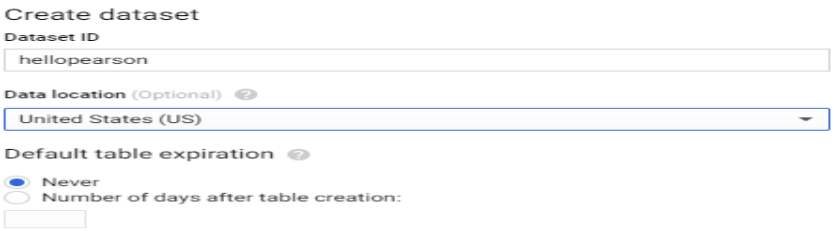
1. Select project
2. Select Create Dataset



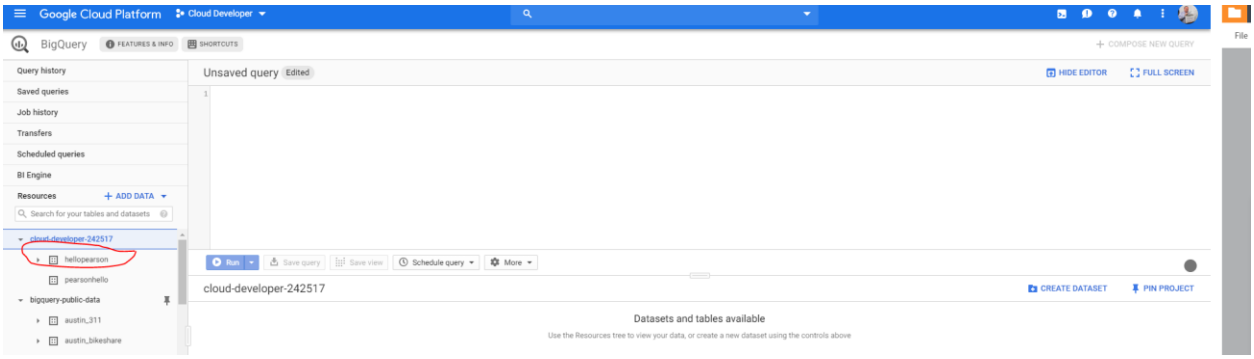
Create Dataset

1. Enter dataset name
2. Select Region
3. Select Expiration choice

Now select Create Dataset



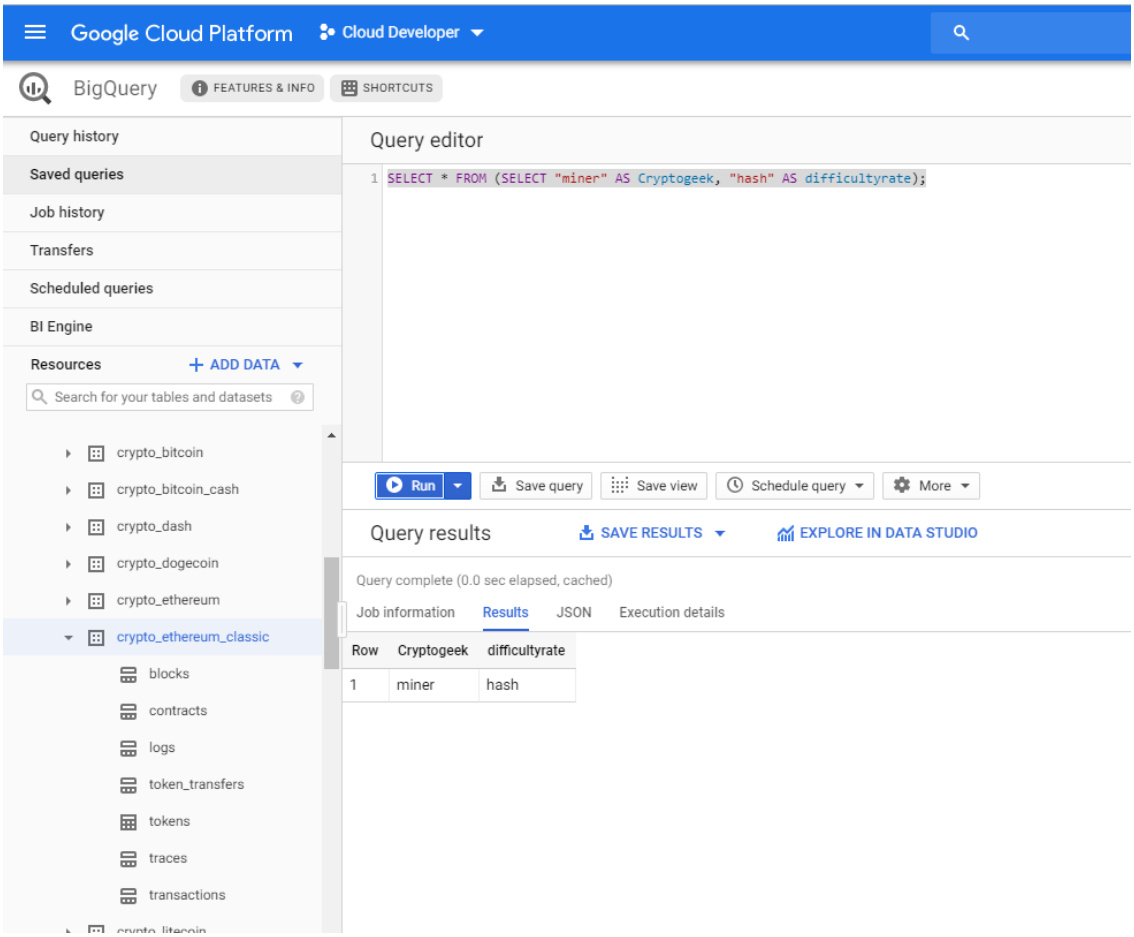
Validate under project Dataset was created



Query Data

-Run select statement from data set. (Example from public dataset)

SELECT * FROM (SELECT "miner" AS Cryptogeek, "hash" AS difficultyrate);



GSUTIL - Managing buckets and objects in Cloud Storage

Create nearline Storage Bucket named pearson

gsutil mb -c nearline gs://pearson

List all storage buckets in project

gsutil ls

View bucket information

gsutil ls -L -b gs://pearson

Cloud Build

Run a Cloud Build Script

gcloud builds submit --config helloworld.yaml

APP ENGINE

Deploy code to App Engine which is version a

Gcloud app deploy app.yaml -v a

Gcloud app browse

Cloud Source Repositories

gcloud source repos clone CloudDeveloper --project=cloud-developer-242517